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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/555,922	12/26/2006	**Eduard Gerum**	12841/8	6487

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EXAMINER	
WILLIAMS, THOMAS J	

ART UNIT	PAPER NUMBER
3657	

MAIL DATE	DELIVERY MODE
06/28/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/555,922	GERUM ET AL.	
	Examiner	Art Unit	
	Thomas J. Williams	3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32-36 and 38-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *39,40,45-53,55,58 and 59* is/are allowed.

6)☒ Claim(s) *32-36,38,41-44,54,56,57 and 60-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Acknowledgment is made in the receipt of the amendment filed May 10, 2010.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 32-36, 44, 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 200/0180270 A1 to Heckmann et al. in view of US 5,042,883 to McCann et al.

Re-claim 32-36, 44 and 56, Heckmann et al. teach a braking system, comprising: at least one first brake circuit (associated with power supply E1); at least one second brake circuit (associated with power supply E2), each circuit has an electrical control unit (central unit 10 has at least two micro-computers, each is interpreted as an electrical control unit) and its own power supply, brake actuating devices of the front wheels are associated with circuit E1 and brake actuating devices of the rear wheels are associated with circuit E2 (see figure 2, and paragraph

16 lines 19-26), in addition the brake actuating devices are activatable by more than one electronic control unit of the central unit (see figure 1, brake actuation information is transmitted to each BUS line 102 and 104, and subsequently to each of the brake actuating devices); the circuits are activated by a foot pedal, or foot brake valve; each circuit is DC isolated (see electrical separating elements 152, 154, 156 and 158). However, Heckman et al. fails to teach the specifics of the foot brake valve, and in particular the foot brake valve having two electrical braking transmitter devices, each device connected to each control unit.

McCann et al. teach an electronic brake system comprising a foot brake valve having two electrical braking transmitting devices, one associated with the front brakes and the other associated with the rear brakes. It would have been obvious to one of ordinary skill in the art to have provided the system of Heckmann et al. with an appropriate foot brake valve of the type taught by McCann et al., thereby providing independent brake actuating signals to each of the isolated circuits to ensure proper braking function.

Re-claim 54, each brake circuit can assume the function of the other brake circuit in the event of a failure of the other brake circuit, see paragraph 15.

5. Claims 38 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heckmann et al. in view of McCann et al. as applied to claim 32 above, and further in view of US 3,566,242 to Williams.

Re-claims 38 and 57, it is known that one can charge a first battery via a second battery, as taught by Williams. It would have been obvious to one of ordinary skill in the art to have provided the batteries (i.e. power supplies) of the braking system in Heckmann et al. with the capability to charge one another, or specifically a first battery capable of charging a second

battery as taught by Williams, thus ensuring sufficient power is available to each DC isolated circuit.

6. Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heckmann et al. in view of McCann et al. as applied to claim 32 above, and further in view of US 7,128,376 to Williams et al.

Re-claim 41, Heckmann et al. as modified by McCann et al. fail to teach two separate supply circuits, such as a service supply circuit and an emergency supply circuit. Williams et al. teach a brake system comprising two supply circuits, a service supply circuit and an emergency supply circuit. This ensures the availability of braking fluid for use in the brake actuating devices. It would have been obvious to one of ordinary skill in the art to have provided the brake system of Heckmann et al. with both a service supply circuit and emergency supply circuit as taught by Williams et al., thereby ensuring the presence of pressurized fluid for use in the braking actuating devices.

Re-claims 42 and 43,

7. Claims 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heckmann et al. in view of McCann et al. as applied to claim 32 above, and further in view of GB 2 400 506 A to Monkman et al.

Heckmann et al. fail to teach the specific type of DC isolation devices that are used in the brake system, other than they are optical couplers. Monkman et al. teach optical couplers as comprising transducers, see page 1 paragraph 1. These optical couplers isolate electrical systems or components. It would have been obvious to one of ordinary skill in the art when having provided optical couplers in Heckmann et al. to have used optical couplers comprising

transducers as taught by Monkman et al., as these are common in the art and would have achieved the goal of isolating the two circuits.

Response to Arguments

8. Applicant's arguments filed May 10, 2010 have been fully considered but they are not persuasive. Heckmann et al. states in paragraph 14 that the central unit contains at least two microcomputers, each of which is supplied power by one of the two power sources E1 and E2. Each power source E1 and E2 define a first brake circuit and second brake circuit, respectively, see paragraph 16 lines 16-26. As such it is the opinion of the examiner that Heckmann et al. do in fact teach a braking system having a first circuit with an electrical control unit and a second circuit with a second electrical control unit, support for this is also found in paragraph 20 lines 12-13. Each of these units communicates with the other circuit via BUS controller and subsequently with the brake actuating devices associated with that brake circuit. In case of electrical failure of one circuit, the controller of the other circuit can continue to control the brake actuating devices associated with the failed circuit, see paragraph 20 lines 4-13. As understood by the examiner, the control units of central unit transmit signals to local units 26-32, which subsequently activate the brake devices. As such, even though units 26-32 are disposed between the central unit and the brake devices, one can still interpret the control units of the central unit as activating the braking devices, since these units transmit the commanded brake actuating signals.

Allowable Subject Matter

9. Claims 39, 40, 45-53, 55, 58 and 59 are allowed.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128. The examiner can normally be reached on Wednesday-Friday from 6:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi, can be reached at 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

/Thomas J. Williams/
Primary Examiner, Art Unit 3657

June 24, 2010